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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.												
10/773,298	02/09/2004	Seung-Mi Kang	P56973	8751												
7590 Robert E. Bushnell 1522 K Street, N.W. Suite 300 Washington, DC 20005		09/10/2007	<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">LIN, JASON K</td></tr></table> <table border="1"><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>2623</td><td></td></tr></table> <table border="1"><tr><td>MAIL DATE</td><td>DELIVERY MODE</td></tr><tr><td>09/10/2007</td><td>PAPER</td></tr></table>		EXAMINER		LIN, JASON K		ART UNIT	PAPER NUMBER	2623		MAIL DATE	DELIVERY MODE	09/10/2007	PAPER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/773,298	Applicant(s) KANG ET AL.	
	Examiner Jason K. Lin	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 8-11 and 13-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to amendment of application No. 10/773,298 filed on 06/20/2007. **Claims 1-20** are pending and have been examined.

Response to Arguments

2. Applicant's arguments with respect to **claims 1-20** have been considered but are moot in view of the new ground(s) of rejection.

Although a new ground of rejection has been used to address additional limitations that have been added to **claims 1 and 17**, a response is considered necessary for several of applicant's arguments since reference ISO/IEC 13816-6 and JERDING et al. (US 2006/0206913) will continue to be used to meet several claimed limitations.

With respect to applicant's arguments on p. 9, the applicant asserts that that the "Examiner refers to ISO's Resource Manager (SRM) as the claimed *digital broadcasting server*," The examiner respectfully disagrees. No where in the rejection did the examiner indicate that the SRM was the claimed broadcasting server. The examiner did however indicate that in JERDING, the SRM was located at the digital broadcasting server (cable head end) as taught in Fig.2 and paragraph 0037, therefore the SRM makes up a part of the digital broadcasting server as a complete entity as a whole.

The applicant asserts that "it is impermissible within the framework of section 103 for the Examiner to provide his own label of 'server' to the ISO's Session Resource Manager (SRM)..." The examiner respectfully disagrees. The examiner has not taken such a position, please see reasons as stated above.

The applicant also asserts that "the claimed invention is an improvement over by bypassing the Session Resource Manager (SRM)". The applicants statement is duly noted, but nowhere in the claimed invention does state "bypassing the Session Resource Manager."

The applicant further asserts that "Even if the Session Resource Mangers (SRM) is disposed at a cable head end, as suggested by the Examiner rejection incorporating the teachings of Jerding, the Session Resource Manager (SRM) is not bypassed. Thus there is no teaching of *directly requesting, at a client, a digital broadcasting server for a session connection, and establishing a session by receiving a confirmation message for the session connection from the digital broadcasting server.*" The examiner respectfully disagrees. Once again as stated above, the claimed invention does not state bypassing the Session Resource Manager. ISO/IEC 13816-6 in combination with JERDING, teaches a SRM that is located in a digital broadcasting server (cable head end) making the SRM a direct part of the digital broadcasting server entity as a whole. Therefore any messages (ie: session connections) sent directly to the SRM of the combined inventions of ISO/IEC 13816-6 and JERDING, would in effect be sending messages directly to the digital broadcasting server because the SRM is a part of the entire complete entity that makes up the whole of the digital broadcasting server.

With respect to applicant's arguments on p. 10, applicant asserts that "contrary to the Examiner's remarks, the cable television headend 11 is not the server,..." The examiner respectfully disagrees. The headend as a complete entity with all its components is a digital broadcasting server. The headend along with all its

components transmits data digitally to all its connected subscribers as taught in paragraph 0036. The headend and all its components form a single entity that is able to serve digital data to multiple subscribers, thus this headend entity is a digital broadcasting server. Therefore, the examine disagrees with applicants argument on p.11, that asserts "the applied art fails to teach *directly requesting, at a client, a digital broadcasting server for a session connection, and establishing a session by receiving a confirmation message for the session connection from the digital broadcasting server.*" The headend along with all its components form an entire entity that is able to server data digitally to multiple subscribers as stated above and in paragraph 0036 of JERDING. The headend, thus is a digital broadcasting server that incorporates the SRM as part of its local infrastructure. Any messages (ie: session connection) sent directly to the SRM would essentially be sent directly the to digital broadcasting server (headend) since the SRM is incorporated into the entire entity of the digital broadcast server (headend).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-4, 6, 7, 12, 17, 19, 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over ISO/IEC 13818-6 (First edition 1998-09-01) in view of JERDING et al. (2006/0206913).

Consider **claim 1**, ISO/IEC 13818-6 teaches a method for controlling network digital broadcasting service (P. xix [0. Introduction], 2nd paragraph, Described further in detail in Clause 4), comprising steps of:

directly requesting, at a client, a SRM (Session Resource Manager) for a session connection, and establishing a session by receiving a confirmation message for the session connection from the SRM ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 76 Step 1 teaches "the Client shall send ClientSessionSetUpRequest to the Network..." to establish a new session connection. P. 78 Steps 7-8 teaches the client receiving a ClientSessionSetUpConfirm message from the SRM establishing the session connection. As seen on Fig. 4-6, the client is directly sending and receiving messages from the SRM); and

directly requesting, at the client, the digital broadcasting server for a channel change, and changing a channel by receiving a confirmation message for confirming the channel change from the digital broadcasting server (P. 492-495 teaches a client directly requesting a broadcast program from the SDB Server. A SDBProgramSelectRequest is generated by the client and sent to the SDB Server for requesting a channel change. A SDBProgramSelectConfirm from the SDB Server is received by the client allowing the client to receive the requested Broadcast Program),

wherein a message for the channel change and the confirmation message for confirming the channel change each include a DSM-CC (Digital Storage Media-Command and Control) message header field (P. 492-493; Fig. H-4. protocolDiscriminator, dsmccType, messageId, transactionId, reserved, adaptationLength, messageLength make up a DSM-CC message header field as taught in clause 2 on p. 7, which are all present in both messages for channel change and confirmation).

ISO/IEC 13818-6 does not teach that the SRM (Session Resource Manager) can also reside at the digital broadcaster server.

In the same field of endeavor JERDING teaches session setup and controlling video distribution between server and client. JERDING et al. also teaches a SRM (Session Resource Manager) that resides at the digital broadcaster server (cable headend) (Fig. 2, Paragraph 0037 teaches where both

the MOD application server 19 and the digital network control system [DNCS, SRM] are both located at the cable television headend 11.

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of ISO/IEC 13818-6 to include the SRM at the cable headend, as taught in JERDING, for the advantage of providing the cable service providers with greater control and manageability over the broadcasting infrastructure.

Consider **claim 2, as applied to claim 1 above**, ISO/IEC 13818-6 and JERDING et al. teaches receiving, at the client, a message for checking a status of the client from the digital broadcasting server, and directly delivering a confirmation message for checking the status of the client to the digital broadcasting server (P.90-91 teaches that the client can receive a ClientStatusIndication message sent from the SRM which requests information. The client in turn sends back a ClientStatusResponse containing the information that was requested. Referring back to Table 4-16 on P.56, many different statusType fields can be used for specifying what type of status is requested including the status of the client. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

Consider **claim 3, as applied to claim 1 above**, ISO/IEC 13818-6 teaches directly requesting, at the client, the digital broadcasting server for a session termination and terminating a session by receiving a confirmation message for the session termination from the digital broadcasting server ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 81-82 teaches a client initiating a release request. Step 1 teaches the client directly sending a ClientSessionReleaseRequest message to the SRM for releasing an existing session. Step 4-5 teaches receiving a ClientSessionReleaseConfirm message from the SRM terminating the session. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

Consider **claim 4, as applied to claim 1 above**, ISO/IEC 13818-6 teaches directly requesting, at the digital broadcasting server, the client for a session termination and terminating a session by receiving a confirmation message for the session termination from the client (P. 87 – 88, step 2 teaches sending a ClientSessionReleaseIndication to the client for releasing an existing session. The SRM receives the ClientSessionReleaseResponse from the client and releases all the resources assigned to the session terminating the session for the client. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

Consider **claim 6, as applied to claim 1 above**, ISO/IEC 13818-6 teaches wherein a protocol between the client and the digital broadcasting server is a TCP/IP (Transmission Control Protocol/Internet Protocol) (P. xxv teaches that the transport layer in Fig. 0-3 on P. xxiv may consist of any protocol including TCP over IP. P. 291 also teaches that Switched Digital Broadcast (SDB) Channel Change Protocol (CCP) can be carried on top of various protocols including IP where their constraints are further defined in clause 9, allowing for the use of TCP over IP).

Consider **claim 7, as applied to claim 1 above**, ISO/IEC 13818-6 teaches wherein a message for requesting the session connection is a SessionSetupRequest message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a Reserved field, a Client ID field, and a Server ID field, (4.2.4.1 on P. 25-26, and Table 4-8) and the SessionSetupRequest message is transmitted from the client to the digital broadcasting server ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 76 Step 1 teaches "the Client shall send ClientSessionSetUpRequest to the Network..." to establish a new session connection. As seen on Fig. 4-6, the client is sending and receiving messages from the SRM. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

Consider **claim 12, as applied to claim 1 above**, ISO/IEC 13818-6 teaches wherein the confirmation message for confirming the session connection is a SessionSetupConfirm message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a response field, and a Server ID field (4.2.4.2 on P 26-27, and Table 4-9), and the SessionSetupConfirm message is transmitted from the digital broadcasting server to the client ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 78 Steps 7 and 8 teaches the SRM sending a ClientSessionSetUpConfirm message to the client. As seen on Fig. 4-6, the client is sending and receiving messages from the SRM. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

Consider **claim 17**, ISO/IEC 13818-6 teaches a system controlling a network digital broadcasting service (P. xx Fig. 0-1, sP. xix [0. Introduction], 2nd paragraph, Described further in detail in Clause 4) comprises:

a client and a SRM (Session Resource Manager), the client directly requesting the SRM (Session Resource Manager) for a session connection, and establishing a session by receiving a confirmation message for the session connection from the SRM (Session Resource Manager) ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User

to Network Session Messages as stated in the contents on P. iii. P. 76 Step 1 teaches "the Client shall send ClientSessionSetUpRequest to the Network..." to establish a new session connection. P. 78 Steps 7-8 teaches the client receiving a ClientSessionSetUpConfirm message from the SRM establishing the session connection. As seen on Fig. 4-6, the client is directly sending and receiving messages from the SRM); and

the client directly requesting a program change from the digital broadcasting server and receiving a confirmation message from the digital broadcasting server, when the digital broadcasting server confirms the program change (P. 492-495 teaches a client directly requesting a broadcast program from the SDB Server. A SDBProgramSelectRequest is generated by the client and sent to the SDB Server for requesting a channel change. A SDBProgramSelectConfirm from the SDB Server is received by the client allowing the client to receive the requested Broadcast Program),

wherein a message for the channel change and the confirmation message for confirming the channel change each include a DSM-CC (Digital Storage Media-Command and Control) message header field (P. 492-493; Fig. H-4. protocolDiscriminator, dsmccType, messageId, transactionId, reserved, adaptationLength, messageLength make up a DSM-CC message header field as taught in clause 2 on p. 7, which are all present in both messages for channel change and confirmation).

ISO/IEC 13818-6 does not explicitly teach that the SRM (Session Resource Manager) can also reside at the digital broadcaster server.

In the same field of endeavor JERDING teaches session setup and controlling video distribution between server and client. JERDING et al. also teaches a SRM (Session Resource Manager) that resides at the digital broadcaster server (cable headend) (Fig. 2, Paragraph 0037 teaches where both the MOD application server 19 and the digital network control system [DNCS, SRM] are both located at the cable television headend 11).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of ISO/IEC 13818-6 to include the SRM at the cable headend, as taught in JERDING, for the advantage of providing the cable service providers with greater control and manageability over the broadcasting infrastructure.

Consider **claim 19, as applied to claim 17 above**, the ISO/IEC 13818-6 teaches the client directly requesting the digital broadcasting server for a session termination and terminating a session by receiving a confirmation message for the session termination from the digital broadcasting server ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 81-82 teaches a client initiating a release request. Step 1 teaches the client directly sending a ClientSessionReleaseRequest message to the SRM for releasing an

existing session. Step 4-5 teaches receiving a ClientSessionReleaseConfirm message from the SRM terminating the session. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]. As seen on Fig. 4-7, the client is directly sending and receiving messages from the SRM).

Consider **claim 20, as applied to claim 17 above**, the ISO/IEC 13818-6 teaches the digital broadcasting server directly requesting the client for a session termination and terminating a session by receiving a confirmation message for the session termination from the client (P. 87 – 88, step 2 teaches sending a ClientSessionReleaseIndication to the client for releasing an existing session. The SRM receives the ClientSessionReleaseResponse from the client and releases all the resources assigned to the session terminating the session for the client. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]. As seen on Fig. 4-12, the client is directly sending and receiving messages from the SRM).

5. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over ISO/IEC 13818-6 (First edition 1998-09-01) in view of JERDING et al. (2006/0206913), and further in view of Chapman (US 7,113,484).

Consider **claim 5, as applied to claim 1 above**, ISO/IEC 13818-6 teaches directly receiving, at the client, a session termination request from the

digital broadcasting server (P. 99 teaches receiving a ClientSessionReleaseIndication from the SRM for releasing session [session termination]. As seen on Fig. 4-20, the client is directly sending and receiving messages from the SRM. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]), and

ISO/IEC 13818-6 does not teach terminating a session if the client cannot transmit a response to the session termination request from the digital broadcasting server.

In the same field of endeavor Chapman teaches a broadcasting system. Chapman teaches terminating a session if the client cannot transmit a response to the session termination request from the digital broadcasting server (Col 11: lines 23-35 teach that if no response is received from the cable modem [client] the resources allocated to the session is de-allocated [terminated]).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of ISO/IEC 13818-6 and JERDING to include terminating a session [de-allocate resources] when no response is transmitted from the client, as taught in Chapman, for the advantage of freeing up resources for other clients.

6. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over ISO/IEC 13818-6 (First edition 1998-09-01) in view of JERDING et al. (2006/0206913), and further in view of Yun (US 2007/0006254).

Consider **claim 18, as applied to claim 17 above**, ISO/IEC 13818-6 teaches the client receiving a message from the digital broadcasting server for checking a status of the client (P. 100 teaches receiving a ClientStatusIndication message from the SRM for requesting [checking] a status of the client. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]), and directly delivering a client status confirmation message, indicative of the status of the client, to the digital broadcasting server (P. 100 teaches the client sending a ClientStatusResponse message directly to the SRM containing status data of the client. As seen on Fig. 4-21, the client is directly sending and receiving messages from the SRM. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

ISO/IEC 13818-6 does not teach the client periodically receiving a message from the digital broadcasting server for checking a status of the client.

In the same field of endeavor Yun teaches a cable broadcasting system. Yun also teaches the client periodically receiving a message from the digital broadcasting server for checking a status of the client (Paragraph 0090 teaches the cable head end transmitting the command [message] for periodically checking the operation state [status] of the set-top box [client]. The client [POD

and set-top box] periodically receives these commands are sent periodically from the server to the client side).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of ISO/IEC 13818-6 and JERDING to have the client periodically receive messages from the digital broadcasting server for checking a status of a client, as taught in Yun, for the advantage of providing the head end [digital broadcasting server] information regarding the set-top box in realtime (Yun - Paragraph 0073) and providing the head end with a more competitive edge (Paragraph 0035 – 0036).

Allowable Subject Matter

7. **Claims 8-11, 13-16** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The closest prior art teaches different session control messages comprising of the following fields, dsmccMessageHeader(), session ID, reserved, clientID, serverID, response, broadcast programId, reason, statusType, resourceNumber, and resourceStatus.

The closest prior art does not teach or fairly suggest client ID fields in channel change request/confirm, session termination request/confirm, client status request/confirm messages. STB status field is also not taught or fairly suggested for channel change request.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason K. Lin whose telephone number is (571)270-1446. The examiner can normally be reached on Mon-Fri, 9:00AM-6:00PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on (571)272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason Lin

08/31/2007



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